

Murray Hill Parkway Site
September 30, 1992

Report No.: J078-SIP
Rev. No.: 0

CONFIDENTIAL - NOT FOR PUBLIC RELEASE

Summary and Recommendation

The recommendation **SITE EVALUATION ACCOMPLISHED** is given to the Murray Hill Parkway Site. The existing information, data, and additional information collected were sufficient to evaluate the site to determine that no further CERCLA remedial action is needed. This assessment indicates that there is a minimal impact to human and environmental receptors applicable to each pathway evaluation because of the significant distance from the site to those receptors. The recent sampling results indicate no significant concentration of any contaminant attributable to site activities.

DECLASSIFIED

Date: 1/6/16 Initial: jl

246550



APPENDIX D

SITE INSPECTION WORKSHEETS

DRAFT

CONFIDENTIAL -
NOT FOR PUBLIC RELEASE

Site Name:
Date:

*McKenney Hill Parkway Site
(MHPS)*

GENERAL INFORMATION (continued)

Source Descriptions:


- Previous storage of 200 drums of ink waste; no longer stored.
- Contaminated soil from spills and poor housekeeping.

Hazardous Waste Quantity (HWQ) Calculations:
(See SI Tables 1 and 2)

Multi-source site

- 3-4 Acres of contaminated soil $\Rightarrow \frac{4}{0.78} = 5.13$

- 200 Drums $\Rightarrow \frac{200}{10} = 20$

$$\begin{array}{r} 20.00 \\ 5.13 \\ \hline 25.13 \end{array} = \underline{\underline{10 \text{ HWQ}}}$$


HWQ -

10

DRAFT**CONFIDENTIAL - NOT FOR PUBLIC RELEASE**Site Name: *MTHS*

Date:

SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MULTIPLE SOURCE SITES

TIER	SOURCE TYPE	SINGLE SOURCE SITES (assigned HWQ scores)				MULTIPLE SOURCE SITES
		HWQ = 10	HWQ = 100	HWQ = 10,000	HWQ = 1,000,000	
CONSTITUENT	N/A	≤ 100 lbs	> 100 to 10,000 lbs	> 10,000 to 1,000,000 lbs	> 1,000,000 lbs	$lbs + 1$
WASTEWATER	N/A	≤ 500,000 lbs	> 500,000 to 50 million lbs	> 50 million to 5 billion lbs	> 5 billion lbs	$lbs + 5,000$
VOLUME	Landfill	≤ 6.75 million ft ³ ≤ 250,000 yd ³	> 6.75 million to 675 million ft ³ > 250,000 to 25 million yd ³	> 675 million to 67.5 billion ft ³ > 25 million to 2.5 billion yd ³	> 67.5 billion ft ³ > 2.5 billion yd ³	$ft^3 + 67,500$ $yd^3 + 2,500$
	Surface impoundment	≤ 6,750 ft ³ ≤ 250 yd ³	> 6,750 to 675,000 ft ³ > 250 to 25,000 yd ³	> 675,000 to 67.5 million ft ³ > 25,000 to 2.5 million yd ³	> 67.5 million ft ³ > 2.5 million yd ³	$ft^3 + 67.5$ $yd^3 + 2.5$
	Drums	≤ 1,000 drums	> 1,000 to 100,000 drums	> 100,000 to 10 million drums	> 10 million drums	$drums + 10$
	Tanks and non-drum containers	≤ 50,000 gallons	> 50,000 to 5 million gallons	> 5 million to 500 million gallons	> 500 million gallons	$gallons + 500$
	Contaminated soil	≤ 6.75 million ft ³ ≤ 250,000 yd ³	> 6.75 million to 675 million ft ³ > 250,000 to 25 million yd ³	> 675 million to 67.5 billion ft ³ > 25 million to 2.5 billion yd ³	> 67.5 billion ft ³ > 2.5 billion yd ³	$ft^3 + 67,500$ $yd^3 + 2,500$
	Pile	≤ 6,750 ft ³ ≤ 250 yd ³	> 6,750 to 675,000 ft ³ > 250 to 25,000 yd ³	> 675,000 to 67.5 million ft ³ > 25,000 to 2.5 million yd ³	> 67.5 million ft ³ > 2.5 million yd ³	$ft^3 + 67.5$ $yd^3 + 2.5$
AREA	Landfill	≤ 340,000 ft ² ≤ 7.8 acres	> 340,000 to 34 million ft ² > 7.8 to 780 acres	> 34 million to 3.4 billion ft ² > 780 to 78,000 acres	> 3.4 billion ft ² > 78,000 acres	$ft^2 + 3,400$ $acres + 0.078$
	Surface impoundment	≤ 1,300 ft ² ≤ 0.029 acres	> 1,300 to 130,000 ft ² > 0.029 to 2.9 acres	> 130,000 to 13 million ft ² > 2.9 to 290 acres	> 13 million ft ² > 290 acres	$ft^2 + 13$ $acres + 0.00029$
	Contaminated soil	≤ 3.4 million ft ² ≤ 78 acres	> 3.4 million to 340 million ft ² > 78 to 7,800 acres	> 340 million to 34 billion ft ² > 7,800 to 780,000 acres	> 34 billion ft ² > 780,000 acres	$ft^2 + 34,000$ $acres + 0.78$
	Pile*	≤ 1,300 ft ² ≤ 0.029 acres	> 1,300 to 130,000 ft ² > 0.029 to 2.9 acres	> 130,000 to 13 million ft ² > 2.9 to 290 acres	> 13 million ft ² > 290 acres	$ft^2 + 13$ $acres + 0.00029$
	Land treatment	≤ 27,000 ft ² ≤ 0.62 acres	> 27,000 to 2.7 million ft ² > 0.62 to 62 acres	> 2.7 million to 270 million ft ² > 62 to 6,200 acres	> 270 million ft ² > 6,200 acres	$ft^2 + 270$ $acres + 0.0062$

1 ton = 2,000 lbs = 1 yd³ = 4 drums = 200 gallons

* Use area of land surface under pile, not surface area of pile.

SI TABLE 2: HWQ SCORES FOR MULTIPLE SOURCE SITES

Source WQ Total	HWQ Score
> 0 to 100	10
> 100 to 10,000	100
> 10,000 to 1 million	10,000

**CONFIDENTIAL -
NOT FOR PUBLIC RELEASE**

Site Name: *MHPS*
Date:

Source ID:

Hazardous Substance	Toxicity	GW Toxicity/ Mobility	Toxicity/ Persistence	Toxicity/ Persistence/ Bioaccumulation	Ecotoxicity/ Persistence/ Ecobioaccumulation	Air Toxicity/ Mobility
LEAD	10,000	100	10,000	5×10^3	5×10^6	2
ZINC	10	0.1	10	5×10^5	5×10^6	0.002
ARDCLOL-1254 (PCB)	10,000	1	10,000	5×10^8	5×10^9	2
Highest Values	10,000	100	10,000	5×10^9	5×10^8	2

Source ID:

	0	1	2	3	4	5
Highest Values						

Source ID:

[illegible]

Highest Values (All Sources)

10,000

100

10.000

 5×10^9 5×10^8

2

**CONFIDENTIAL -
NOT FOR PUBLIC RELEASE**

Site Name: *MHPS*
Date:

DRAFT

GROUND WATER PATHWAY WORKSHEET

9

NOV 6 1991

LIKELIHOOD OF RELEASE

	Score	Data Type	References
1. OBSERVED RELEASE: If sampling data or direct observation support a release to ground water, assign a score of 550. Record observed release substances on SI Table 4.			
2. NO OBSERVED RELEASE: If sampling data do not support a release to ground water, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340.	500		
LR =	500		

TARGETS

Are any wells part of a blended system? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, attach a page to show apportionment calculations.			
3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any drinking-water well has been exposed to a hazardous substance from the site, calculate the factor score based on the number of people served by using SI Table 5. Level I: _____ people x 10 = _____ Level II: _____ people x 1 = _____ Total = 0			
4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking-water wells that are not exposed to a hazardous substance from the site; record the population for each distance category in SI Table 6a or 6b, and assign the total population score.	132		
5. NEAREST WELL: Assign a score of 50 for any Level I Actual Contamination Targets. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the Nearest Well score from SI Table 6a or 6b. If no drinking-water wells exist within 4 miles, assign 0.	3		
6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA, or if a ground water observed release has occurred within a WHPA, assign a score of 20; assign 5 if neither condition applies but a WHPA is within 4 miles; otherwise assign 0.	0		
7. RESOURCES	5		
T =	140		

DRAFT

6 1991

Site Name: MHPS
Date:

**SI TABLE 6: VALUES FOR POTENTIAL CONTAMINATION GROUND WATER
TARGET POPULATIONS IN NON-KARST AQUIFERS**

Distance from Site	Population	Nearest Well (choose highest)	Population Served by Wells Within Distance Category										Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	
0 to 1/4 mile	<u>0</u>	20	1	2	5	16	52	163	521	1,633	5,214	16,325	<u>0</u>
> 1/4 to 1/2 mile	<u>0</u>	18	1	1	3	10	32	101	323	1,012	3,233	10,121	<u>0</u>
> 1/2 to 1 mile	<u>0</u>	9	1	1	2	5	17	52	167	522	1,668	5,224	<u>0</u>
> 1 to 2 miles	<u>0</u>	5	1	1	1	3	9	29	94	294	939	2,938	<u>0</u>
> 2 to 3 miles	<u>3</u>	<u>3</u>	<u>1</u>	1	1	2	7	21	68	212	678	2,122	<u>1</u>
> 3 to 4 miles	<u>27,000</u>	2	1	1	1	1	4	13	42	<u>131</u>	417	1,306	<u>131</u>
Nearest Well -		<u>3</u>	Score -										<u>132</u>

**SI TABLE 7: VALUES FOR POTENTIAL CONTAMINATION GROUND WATER
TARGET POPULATIONS IN KARST AQUIFERS**

Distance from Site	Population	Nearest Well (use 20 for karst)	Population Served by Wells Within Distance Category										Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	
0 to 1/4 mile	_____	20	1	2	5	16	52	163	521	1,633	5,214	16,325	_____
> 1/4 to 1/2 mile	_____	20	1	1	3	10	32	101	323	1,012	3,233	10,121	_____
> 1/2 to 1 mile	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
> 1 to 2 miles	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
> 2 to 3 miles	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
> 3 to 4 miles	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
Nearest Well -			Score -										

DRAFT

CONFIDENTIAL - NOT FOR PUBLIC RELEASE

DRAFT

CONFIDENTIAL -
NOT FOR PUBLIC RELEASE

Site Name: MHP5
Date:

GROUND WATER PATHWAY (concluded)

WASTE CHARACTERISTICS

8. If you have identified any Actual Contamination Targets for ground water, assign the hazardous waste quantity score calculated on page 4, or a score of 100, whichever is GREATER; if you have NOT identified any Actual Contamination Targets for ground water, assign the hazardous waste quantity score calculated on page 4.

10

9. Assign the highest ground water toxicity/mobility value from SI Table 3 or 4.

100

10. Multiply the ground water toxicity/mobility and waste quantity scores. Assign the Waste Characteristics score from the table below:

Product	WC Score	Product	WC Score
0	0	10,000 to <1E+05	10
>0 to <10	1	1E+05 to <1E+06	18
10 to <100	2	1E+06 to <1E+07	32
100 to <1,000	3	1E+07 to <1E+08	58
1,000 to <10,000	6	1E+08 or greater	100

WC = 6

GROUND WATER PATHWAY SCORE:
(subject to a maximum of 100)

$$\frac{LR \times T \times WC}{82,500} =$$

5.09

DRAFT**CONFIDENTIAL -
NOT FOR PUBLIC RELEASE**Site Name: *MHPS*
Date:

NOV 6 1991

**SURFACE WATER PATHWAY
LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET****14****LIKELIHOOD OF RELEASE**

	Score	Data Type	References												
1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water, assign a score of 550. Record observed release substances on SI Table 7.															
2. NO OBSERVED RELEASE: If sampling data do not support a release to surface water, use the table below to assign a score based on distance to surface water and flood frequency.															
<table border="1"><tr><td>Distance to surface water < 2500 feet</td><td>500</td></tr><tr><td>Distance to surface water > 2500 feet, and</td><td></td></tr><tr><td>Site in annual or 10-yr floodplain</td><td>500</td></tr><tr><td>Site in 100-yr floodplain</td><td>400</td></tr><tr><td>Site in 500-yr floodplain</td><td>300</td></tr><tr><td>Site outside 500-yr floodplain</td><td>100</td></tr></table>	Distance to surface water < 2500 feet	500	Distance to surface water > 2500 feet, and		Site in annual or 10-yr floodplain	500	Site in 100-yr floodplain	400	Site in 500-yr floodplain	300	Site outside 500-yr floodplain	100	500		
Distance to surface water < 2500 feet	500														
Distance to surface water > 2500 feet, and															
Site in annual or 10-yr floodplain	500														
Site in 100-yr floodplain	400														
Site in 500-yr floodplain	300														
Site outside 500-yr floodplain	100														
LR =	500														

DRINKING WATER THREAT TARGETS

3. Record the water body type, flow (if applicable), and number of people served by each drinking-water intake within the target distance limit. If there is no drinking-water intake within the target distance limit, assign 0 to factors 4, 5, and 6.																			
<table border="1"><thead><tr><th>Intake Name</th><th>Water Body Type</th><th>Flow</th><th>People Served</th></tr></thead><tbody><tr><td></td><td></td><td>cfs</td><td></td></tr><tr><td></td><td></td><td>cfs</td><td></td></tr><tr><td></td><td></td><td>cfs</td><td></td></tr></tbody></table>	Intake Name	Water Body Type	Flow	People Served			cfs				cfs				cfs		0		
Intake Name	Water Body Type	Flow	People Served																
		cfs																	
		cfs																	
		cfs																	
Are any intakes part of a blended system? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, attach a page to show apportionment calculations.																			
4. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any drinking-water intake listed above has been exposed to a hazardous substance from the site, list the intake name and calculate the factor score based on the intake population from SI Table 8.																			
Level I: _____ people x 10 = _____ Level II: _____ people x 1 = _____ Total = 0	0																		
5. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking-water intakes that have not been exposed to a hazardous substance from the site, and assign the total population score from SI Table 9.	0																		
6. NEAREST INTAKE: Assign a score of 50 for any Actual Contamination Targets. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the nearest intake score from SI Table 9. If no drinking-water intakes exist, assign 0.	0																		
7. RESOURCES	0																		
T =	0																		

DRAFT

NOV 6 1991

DRAFT

JUN 25 1971

Site Name: *MHPS*
Date:

SI TABLE 10: VALUES FOR POTENTIAL CONTAMINATION SURFACE WATER TARGET POPULATIONS

Face Water by Flow Characteristics (SI Table 11)	Population	Nearest Intake (Miles Highest)	Population Served by Intake Within Flow Category											Population Value
			1	31	101	301	1,001	3,001	10,001	30,001	100,001	300,001	1,000,001	
			to 20	to 100	to 300	to 1,000	to 3,000	to 10,000	to 30,000	to 100,000	to 300,000	to 1,000,000	to 3,000,000	
> 10 cfs	_____	20	2	5	16	52	163	521	1,633	5,214	16,325	52,136	163,246	_____
> 100 cfs	_____	2	1	1	2	5	16	52	163	521	1,633	5,214	16,325	_____
10 to 1,000 cfs	_____	1	0	0	1	2	5	16	52	163	521	1,633	_____	_____
1,000 to 10,000 cfs	_____	0	0	0	0	1	1	2	5	16	52	163	_____	_____
> 1,000 cfs or in Lakes	_____	0	0	0	0	0	0	1	1	2	5	16	_____	_____
in Mining Zone	_____	10	1	3	8	26	82	261	816	2,607	8,162	26,068	81,623	_____
Nearest Intake = _____			Score = _____											

**SI TABLE 11: SURFACE WATER TYPE / FLOW CHARACTERISTICS WITH
DILUTION WEIGHTS FOR POTENTIAL CONTAMINATION SURFACE WATER SENSITIVE ENVIRONMENTS**

Type of Surface Water Body		Dilution Weight
Water Body Type	OR Flow Characteristics	
minimal stream	flow less than 10 cfs	1
small to moderate stream	flow 10 to 100 cfs	0.1
moderate to large stream	flow greater than 100 to 1,000 cfs	
large stream to river	flow greater than 1,000 to 10,000 cfs	
large river	flow greater than 10,000 cfs	
3-mile mining zone of quiet flowing streams or rivers	flow 10 cfs or greater	
coastal tidal water (harbors, sounds, bays, etc.), ocean, or Great Lakes	N/A	

CONFIDENTIAL - NOT FOR PUBLIC RELEASE

CONFIDENTIAL -
DRAFT NOT FOR PUBLIC RELEASE

Site Name: *M/HPS*
 Date:

SURFACE WATER PATHWAY (continued)
HUMAN FOOD CHAIN THREAT WORKSHEET

HUMAN FOOD CHAIN THREAT TARGETS

8. Determine the water body types and flows (if applicable) for all fisheries within the 15-mile target distance limit. If there are no fisheries within the target distance limit, assign a score of 0 at the bottom of this page and proceed to page 18.

<i>Fishery Name (Species or Water Body)</i>	<i>Water Body Type</i>	<i>Flow</i>
<i>Huskwaga River</i>	<i>River</i>	<i>> 1000 cfs</i>
<i>Newark Bay</i>	<i>Coastal Tidal</i>	<i>— cfs</i>
	<i>Waters</i>	<i>N/A cfs</i>
		<i>cfs</i>
		<i>cfs</i>

9. **ACTUAL CONTAMINATION FISHERIES:** If you have identified any Actual Contamination Fisheries, record contaminant information on SI Table 12. Assign a score of 50 if any are Level I fisheries, or 45 if all are Level II. In either case, do not evaluate Potential Contamination Fisheries.

10. **POTENTIAL CONTAMINATION FISHERIES:** If you have not identified any Actual Contamination Fisheries, assign a Potential Contamination Fisheries score from the table below using the LOWEST flow at any fishery within the 15-mile target distance limit.

<i>Lowest Flow</i>	<i>Potential Fisheries Score</i>
<i>< 10 cfs</i>	<i>21</i>
<i>10 to 100 cfs</i>	<i>3</i>
<i>> 100 cfs, coastal tidal waters, oceans, or Great Lakes</i>	<i>1</i>

Score Data Type Reference

T =

DRAFT

CONFIDENTIAL -

NOT FOR PUBLIC RELEASE

Site Name:

Date:

MHPS

SURFACE WATER PATHWAY (continued)
ENVIRONMENTAL THREAT WORKSHEET

ENVIRONMENTAL THREAT TARGETS

Score Data Type Reference

11. Determine the water body types and flows (if applicable) for all surface water sensitive environments within the 15-mile target distance limit (see SI Tables 14 and 15). If there are no sensitive environments within the 15-mile target distance limit, assign a Targets score of 0 at the bottom of this page, and proceed to page 20.

Environment Name and Type	Water Body Type	Flow
WETLANDS	BERRY'S CREEK	TIDAL cfs
FED. END. SPECIES HABITAT	BERRY'S CREEK	TIDAL cfs
STATE THREAT. SPECIES HABITAT	BERRY'S CREEK	TIDAL cfs
WETLANDS ALONG DRAINAGE PATHWAY		cfs
FROM SITE TO BERRY'S CREEK	SMALL STREAM	< 100 cfs

12. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: If sampling data indicate any sensitive environment has been exposed to hazardous substances from the site, record this information on SI Table 13, and assign a factor score using the environment value from SI Table 14 or 15.

Environment Name	Environment Type and Value (SI Tables 14 or 15)	Multiplier (10 for Level I, 1 for Level II)	Product
	x	=	
	x	=	
	x	=	
	x	=	

13. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS:

- A. For Potentially Contaminated Sensitive Environments located on surface water bodies with flows of 100 cfs or less, assign scores as follows:

Flow	Dilution Weight (SI Table 11)	Environment Type and Value (SI Tables 14 or 15)	Product
~ 99 cfs	0.1	x WETLAND (25)	x 0.1 = 0.25
cfs	x	x	x 0.1 =
cfs	x	x	x 0.1 =
cfs	x	x	x 0.1 =
cfs	x	x	x 0.1 =

Sum = 0.25

- B. If any Potentially Contaminated Sensitive Environments are located on surface water bodies with flows of greater than 100 cfs, assign a score of 1.

T = 1.25

DRAFT

JUN 25 1991

CONFIDENTIAL - NOT FOR PUBLIC RELEASESite Name: *MHPS*

Date:

SI TABLE 14: SURFACE WATER AND AIR SENSITIVE ENVIRONMENTS VALUES

Sensitive Environment	Assigned Value
Critical habitat for Federally designated endangered or threatened species	100
Marine Sanctuary	
National Park	
Designated Federal Wilderness Area	
Ecologically important areas identified under the Coastal Zone Wilderness Act	
Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act	
Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes)	
National Monument (Air Pathway Only)	
National Seashore Recreation Area	
National Lakeshore Recreation Area	
Habitat known to be used by Federally designated or proposed endangered or threatened species	75
National Preserve	
National or State Wildlife Refuge	
Unit of Coastal Barrier Resources System	
Federal land designated for the protection of natural ecosystems	
Administratively Proposed Federal Wilderness Area	
Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay or estuary	
Migratory pathways and feeding areas critical for the maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time	
Terrestrial areas utilized by large or dense aggregations of vertebrate animals (semi-aquatic foragers) for breeding	
National river reach designated as recreational	
Habitat known to be used by State designated endangered or threatened species	50
Habitat known to be used by a species under review as to its Federal endangered or threatened status	
Coastal Barrier (partially developed)	
Federally designated Scenic or Wild River	
State land designated for wildlife or game management	25
State designated Scenic or Wild River	
State designated Natural Area	
Particular areas, relatively small in size, important to maintenance of unique biotic communities	
State designated areas for the protection or maintenance of aquatic life under the Clean Water Act	5
Wetlands	See SI Table 15 (Surface Water Pathway) or SI Table 20 (Air Pathway)

SI TABLE 15: SURFACE WATER WETLANDS FRONTAGE VALUES

Total Length of Wetlands	Assigned Value
Less than 0.1 mile	0
0.1 to 1 mile	25
Greater than 1 to 2 miles	50
Greater than 2 to 3 miles	75
Greater than 3 to 4 miles	100
Greater than 4 to 8 miles	150
Greater than 8 to 12 miles	250
Greater than 12 to 16 miles	350
Greater than 16 to 20 miles	450
Greater than 20 miles	500

DRAFTCONFIDENTIAL -
NOT FOR PUBLIC RELEASESite Name: *MHP5*
Date:SURFACE WATER PATHWAY (concluded)
WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY**WASTE CHARACTERISTICS**

Score

14. If you have identified any Actual Contamination Targets for surface water, assign the hazardous waste quantity score calculated on page 4, or a score of 100, whichever is GREATER; if you have NOT identified any Actual Contamination Targets for surface water, assign the hazardous waste quantity score calculated on page 4.

10

15. Assign the highest value from SI Table 3 or 8 for the hazardous substance factors listed below. Multiply each by the surface water waste quantity score, and determine the waste characteristics score for each threat using the table below.

	Substance Value	Hazardous Waste Quantity	Product
Drinking Water Threat Toxicity/Persistence	10,000 ^x	10 ⁼	100,000
Food Chain Threat Toxicity/Persistence/Bioaccumulation	5 x 10 ⁸ ^x	10 ⁼	5 x 10 ⁹
Environmental Threat Ecotoxicity/Persistence/ Ecobioaccumulation	5 x 10 ⁸ ^x	10 ⁼	5 x 10 ⁹

WC Score
(from Table)

18

(maximum of 100)

180

(maximum of 1,000)

180

(maximum of 1,000)

Product	WC Score	Product	WC Score
0	0	1E+06 to <1E+07	32
>0 to <10	1	1E+07 to <1E+08	56
10 to <100	2	1E+08 to <1E+09	100
100 to <1,000	3	1E+09 to <1E+10	180
1,000 to <10,000	6	1E+10 to <1E+11	320
10,000 to <1E+05	10	1E+11 to <1E+12	560
1E+05 to <1E+06	18	1E+12 or greater	1000

SURFACE WATER PATHWAY THREAT SCORES

Threat	Likelihood of Release (LR) Score (from page 14)	Targets (T) Score	Threat Waste Characteristics (WC) Score (determined above)	Threat Score $LR \times T \times WC/82.5$ (maximum of 100)
Drinking Water	500	0	18	0 (maximum of 100)
Human Food Chain	500	1	180	1.09 (maximum of 100)
Environmental	500	1.25	180	1.36 (maximum of 80)

SURFACE WATER PATHWAY SCORE(Drinking Water Threat + Human Food Chain Threat + Environmental Threat)
(subject to a maximum of 100)

2.45

NOV 6 1991

**CONFIDENTIAL -
NOT FOR PUBLIC RELEASE**

Site Name: *MHPS*
Date:

SOIL EXPOSURE PATHWAY WORKSHEET

22

LIKELIHOOD OF EXPOSURE

	Score	Date Type	References
1. OBSERVED CONTAMINATION: If evidence indicates presence of surficial contamination (depth of 2 feet or less), assign a score of 550; otherwise, assign 0. Note that a likelihood of exposure score of 0 results in a soil exposure score of 0 (page 23).	550		
LE =	550		

RESIDENT POPULATION THREAT TARGETS

<p>2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or daycare on or within 200 feet of areas of surficial contamination. Calculate the concentration level on SI Table 15 and enter the number of people:</p> <p>Level I: _____ people x 10 = _____</p> <p>Level II: _____ people x 1 = _____ Total = 0</p>													
<p>3. RESIDENT INDIVIDUAL: Assign a score of 50 if any Level I resident population exists. Assign a score of 45 if there are Level II targets but no Level I targets. If no resident population exists, assign 0.</p>	0												
<p>4. WORKERS: Assign a score from the table below for the total number of workers at the site and nearby facilities with areas of surficial contamination associated with the site:</p> <table border="1"> <thead> <tr> <th>Number of Workers</th> <th>Score</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1 to 100</td> <td>5</td> </tr> <tr> <td>101 to 1,000</td> <td>10</td> </tr> <tr> <td>>1,000</td> <td>15</td> </tr> </tbody> </table> <p>→</p>	Number of Workers	Score	0	0	1 to 100	5	101 to 1,000	10	>1,000	15	5		
Number of Workers	Score												
0	0												
1 to 100	5												
101 to 1,000	10												
>1,000	15												
<p>5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Use SI Table 16 to assign a value for each terrestrial sensitive environment on an area of surficial contamination:</p> <table border="1"> <thead> <tr> <th>Terrestrial Sensitive Environment Type</th> <th>Value</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Terrestrial Sensitive Environment Type	Value											
Terrestrial Sensitive Environment Type	Value												
Sum =	0												
6. RESOURCES	0												
T =	5												

DRAFT

**CONFIDENTIAL -
NOT FOR PUBLIC RELEASE**

Site Name: MHPS
Date:

SOIL EXPOSURE PATHWAY WORKSHEET (continued)

23

WASTE CHARACTERISTICS

7. Assign the hazardous waste quantity score calculated on page 4.	<u>10</u>																										
8. Assign the highest toxicity value from SI Table 15.	<u>10,000</u>																										
9. Multiply the toxicity and waste quantity scores. Assign the Waste Characteristics score from the table below:	WC = 18																										
<table border="1" style="width:100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th style="width:30%;">Product</th> <th style="width:20%;">WC Score</th> <th style="width:30%;">Product</th> <th style="width:20%;">WC Score</th> </tr> </thead> <tbody> <tr> <td>0</td> <td align="center">0</td> <td>10,000 to <1E+0</td> <td align="center">10</td> </tr> <tr> <td>>0 to <10</td> <td align="center">1</td> <td>1E+05 to <1E+0</td> <td align="center">18</td> </tr> <tr> <td>10 to <100</td> <td align="center">2</td> <td>1E+06 to <1E+0</td> <td align="center">32</td> </tr> <tr> <td>100 to <1,000</td> <td align="center">3</td> <td>1E+07 to <1E+0</td> <td align="center">56</td> </tr> <tr> <td>1,000 to <10,000</td> <td align="center">6</td> <td>1E+08 or greater</td> <td align="center">100</td> </tr> </tbody> </table>			Product	WC Score	Product	WC Score	0	0	10,000 to <1E+0	10	>0 to <10	1	1E+05 to <1E+0	18	10 to <100	2	1E+06 to <1E+0	32	100 to <1,000	3	1E+07 to <1E+0	56	1,000 to <10,000	6	1E+08 or greater	100	
Product			WC Score	Product	WC Score																						
0			0	10,000 to <1E+0	10																						
>0 to <10			1	1E+05 to <1E+0	18																						
10 to <100	2	1E+06 to <1E+0	32																								
100 to <1,000	3	1E+07 to <1E+0	56																								
1,000 to <10,000	6	1E+08 or greater	100																								

RESIDENT POPULATION THREAT SCORE:

$$\frac{LE \times T \times WC}{82,500} =$$

0.6

NEARBY POPULATION THREAT SCORE:

Population within one mile: 8,070

1

SOIL EXPOSURE PATHWAY SCORE:

Resident Population Threat + Nearby Population Threat

1.6

Nearby Population Threat Score: Assign a score based on the population within a 1-mile radius (use the 1-mile radius population for the air pathway)

Population Within One Mile	Nearby Population Threat Score
<10,000	1
10,000 to 50,000	2
>50,000	4

CONFIDENTIAL

NOT FOR PUBLIC RELEASE

Site Name: *MHPS*
Date:

AIR PATHWAY WORKSHEET

26

LIKELIHOOD OF RELEASE

	Score	Date Type	References
1. OBSERVED RELEASE: If sampling data or direct observation support a release to air, assign a score of 550. Record observed release substances on SI Table 17.			
2. NO OBSERVED RELEASE: If sampling data do not support a release to air, assign a score of 500.	500		
LR = 500			

TARGETS

<p>3. ACTUAL CONTAMINATION POPULATION: Determine the number of people subject to exposure from a release of a hazardous substance to the air. Calculate levels of exposure on SI Table 17.</p> <p>Level I: _____ people x 10 = _____</p> <p>Level II: _____ people x 1 = _____ Total = 0</p>																							
<p>4. POTENTIAL TARGET POPULATION: Determine the number of people not subject to exposure from a release of a hazardous substance to the air, and assign the total population score from SI Table 18.</p>	78																						
<p>5. NEAREST INDIVIDUAL: Assign a score of 50 if there are any Level I targets. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Population exists, assign the Nearest Individual score from SI Table 18.</p>	20																						
<p>6. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: Sum the sensitive environment values (SI Table 13) and wetland acreage values (SI Table 19) for environments subject to exposure from the release of a hazardous substance to the air.</p> <table border="1"> <thead> <tr> <th>Sensitive Environment Type</th> <th>Value</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Wetland Acreage</th> <th>Value</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Sensitive Environment Type	Value									Wetland Acreage	Value											
Sensitive Environment Type	Value																						
Wetland Acreage	Value																						
Sum =																							
7. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS: Use SI Table 20 to determine the score for sensitive environments not subject to exposure from a release.	1.71																						
8. RESOURCES	0																						
T = 99.71																							

DRAFT

JUN 25 1991

Site Name: MHPS
Date:

SI TABLE 19: VALUES FOR POTENTIAL CONTAMINATION AIR TARGET POPULATIONS

Distance on Site	Population	Nearest Individual (choose highest)	Population Within Distance Category												Population Value	
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,001 to 3,000,000		
on site	<u>90</u>	<u>20</u>		2	<u>5</u>	16	52	163	521	1,633	5,214	16,325	52,136	163,246	<u>5</u>	
0 to 1/4 mile	<u>0</u>	20	1	1	1	4	13	41	130	408	1,303	4,081	13,034	40,811	<u>0</u>	
1/4 to 1/2 mile	<u>410</u>	2	0	0	1	1	<u>3</u>	9	28	88	282	882	2,815	8,815	<u>3</u>	
1/2 to 1 mile	<u>2,660</u>	1	0	0	0	1	1	3	<u>8</u>	26	83	261	834	2,612	<u>8</u>	
1 to 2 miles	<u>43,270</u>	0	0	0	0	0	1	1	3	8	<u>27</u>	83	266	833	<u>27</u>	
2 to 3 miles	<u>69,570</u>	0	0	0	0	0	1	1	1	4	<u>12</u>	38	120	376	<u>12</u>	
3 to 4 miles	<u>141,780</u>	0	0	0	0	0	0	1	1	2	7	<u>23</u>	73	229	<u>23</u>	
Nearest individual =		<u>20</u>													Score =	<u>78</u>

SI TABLE 20: AIR PATHWAY VALUES FOR WETLAND AREA

Less than 1 acre	0
1 to 50 acres	25
Greater than 50 to 100 acres	75
Greater than 100 to 150 acres	125
Greater than 150 to 200 acres	175
Greater than 200 to 300 acres	250
Greater than 300 to 400 acres	350
Greater than 400 to 500 acres	450
Greater than 500 acres	500

SI TABLE 21: DISTANCE WEIGHTS AND CALCULATIONS FOR AIR PATHWAY POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENT

Distance	Distance Weight	Sensitive Environment Type and Value	Product
Onsite	0.10	x	
		x	
0-1/4 mi	0.025	x WETLANDS = 33 Acres (25)	0.625
		x	
		x	
1/4-1/2 mi	0.0054	x WETLANDS = 81 Acres (75)	0.405
		x FED. EDD. SPECIES HABITAT (75)	0.405
		x STATE THREAT. SPECIES HABITAT 2(25)	0.27
		x	
Total Environments Score =			<u>1.71</u>

CONFIDENTIAL - NOT FOR PUBLIC RELEASE

DRAFT

CONFIDENTIAL -
NOT FOR PUBLIC RELEASE

Site Name: *MHP5*
Date:

JUN 25 1991

AIR PATHWAY (concluded)

WASTE CHARACTERISTICS

9. If you have identified any Actual Contamination Targets for the air pathway, assign the hazardous waste quantity score calculated on page 4, or a score of 100, whichever is GREATER; if you have NOT identified any Actual Contamination Targets for the air pathway, assign the hazardous waste quantity score calculated on page 4.	<i>10</i>																							
10. Assign the highest air toxicity/mobility value from SI Table 3 or 18.	<i>2</i>																							
11. Multiply the air pathway toxicity/mobility and waste quantity scores. Assign the Waste Characteristics score from the table below:	<i>WC = 2</i>																							
<table border="1"><thead><tr><th>Product</th><th>WC Score</th><th>Product</th><th>WC Score</th></tr></thead><tbody><tr><td>0</td><td>0</td><td>10,000 to <1E+05</td><td>10</td></tr><tr><td>>0 to <10</td><td>1</td><td>1E+05 to <1E+06</td><td>18</td></tr><tr><td>10 to <100</td><td>2</td><td>1E+06 to <1E+07</td><td>32</td></tr><tr><td>100 to <1,000</td><td>3</td><td>1E+07 to <1E+08</td><td>56</td></tr><tr><td>1,000 to <10,000</td><td>6</td><td>1E+08 or greater</td><td>100</td></tr></tbody></table>			Product	WC Score	Product	WC Score	0	0	10,000 to <1E+05	10	>0 to <10	1	1E+05 to <1E+06	18	10 to <100	2	1E+06 to <1E+07	32	100 to <1,000	3	1E+07 to <1E+08	56	1,000 to <10,000	6
Product	WC Score	Product	WC Score																					
0	0	10,000 to <1E+05	10																					
>0 to <10	1	1E+05 to <1E+06	18																					
10 to <100	2	1E+06 to <1E+07	32																					
100 to <1,000	3	1E+07 to <1E+08	56																					
1,000 to <10,000	6	1E+08 or greater	100																					

AIR PATHWAY SCORE:
(subject to a maximum of 100)

$$\frac{LR \times T \times WC}{82,500} = \boxed{1.21}$$

DRAFT

CONFIDENTIAL -
NOT FOR PUBLIC RELEASE

Site Name: *MHPS*
Date:

SITE SCORE CALCULATION

	S	S ²
GROUND WATER PATHWAY SCORE (S _{gw}):	5.09	25.91
SURFACE WATER PATHWAY SCORE (S _{sw}):	2.45	6.00
SOIL EXPOSURE PATHWAY SCORE (S _{so}):	1.6	2.56
AIR PATHWAY SCORE (S _a):	1.21	1.46
SITE SCORE:	$\sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_{so}^2 + S_a^2}{4}} =$	
	3.00	